

Work Order ID 146053

Friday, May 06, 2016 8:58:22 AM

146053

Page 1

Item ID: D4541-2 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bracket
 Start Date: 5/30/2016 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 6/2/2016 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: dm Date: 16/05/09 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4541	E								
100		0.00							
100									
Waterjet	Memo	1.08							
FLOW CNC Waterjet	1- Cut as per dwg Prog rev: <u>E</u> Dwg rev: <u>E</u>								
	2- Deburr								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.06							
Quality Control									

PR 2016/07/09

DAS
14 16/07/10
9-39

PR 2016/07/10

DAS
14 16/07/10
9-39

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 146053

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Page 2

Item ID: D4541-2

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket

Start Date: 5/30/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 6/2/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.12

Quality Control

DAS
38
9-89
JUL 14 2016

130

0.08

130

Small Fab

Memo

0.66

Small Fab

BEND INDIVIDUAL TABS AS PER DWG

DAS
30
9-89

JUL 19 2016

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.12

Quality Control

DAS
38
9-89

JUL 20 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

Work Order ID 146053

Friday, May 06, 2016 8:58:22 AM

146053

Page 4

Item ID: D4541-2

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket

Start Date: 5/30/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 6/2/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.60							
Quality Control									

DAS
21~~9-89~~ JUL 7 2 2016DAS
21
9-89

JUL 22 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Picklist Print

Friday, May 06, 2016 8:58:22 AM

Page 1
1

Work Order ID: 146053

146053

Parent Item: D4541-2

D4541-2

Parent Item Name: Bracket

Start Date: 5/30/2016

Required Date: 6/2/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP revA 12.01.12 New Issue EC verified by:DD IPP REV:B
12.02.24 as per dwg revb DD verf:EC IPP REV:C 12.05.08 as
per dwg revC DD verf:EC IPP REV:D 13.04.23 as per dwg
revD DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6S.032		Purchased		No			sf	151.4668		2.627368			
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M6061T6S 032

6061-T6 Sheet 0.032"

PR 2016/07/10
DAS
14
9-39 16/07/10

Location	Loc Qty	Loc Code
MAT021	151.46675	
m131352	48.1	
m132772	5.195	
m133757	98.17175	

3.2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

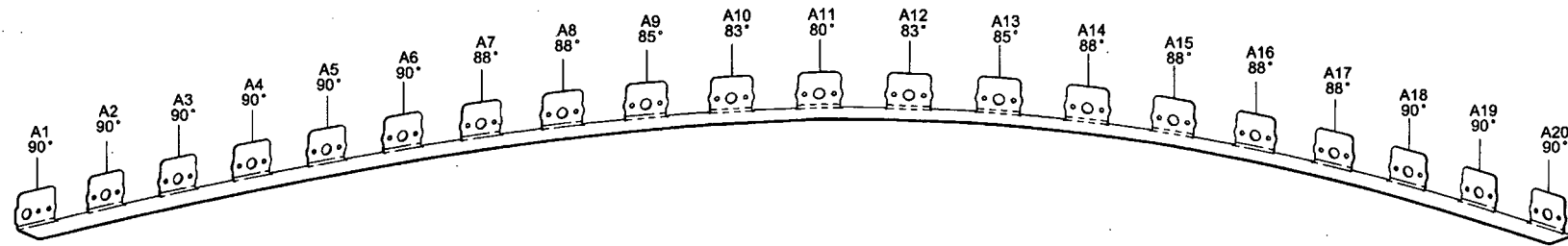
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : ☐			

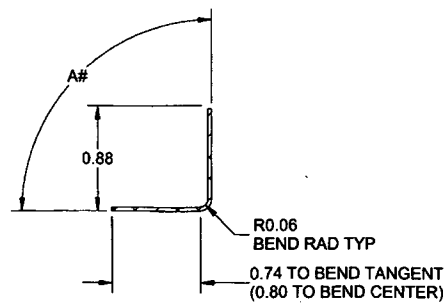
FIRST ARTICLE INSPECTION CHECKLIST

Rev	Date	Change	Revised by	Approved
A	12.05.15	New Issue	KJ	
B	13.02.27	Dimensions revised	KJ	
C	13.05.08	Dwg Rev updated	KJ	
D	14.03.31	Dimensions updated per Dwg Rev E	K	

8 7 6 5 4 3 2 1



D4541-1 BRACKET



RELEASED
2014-05-26

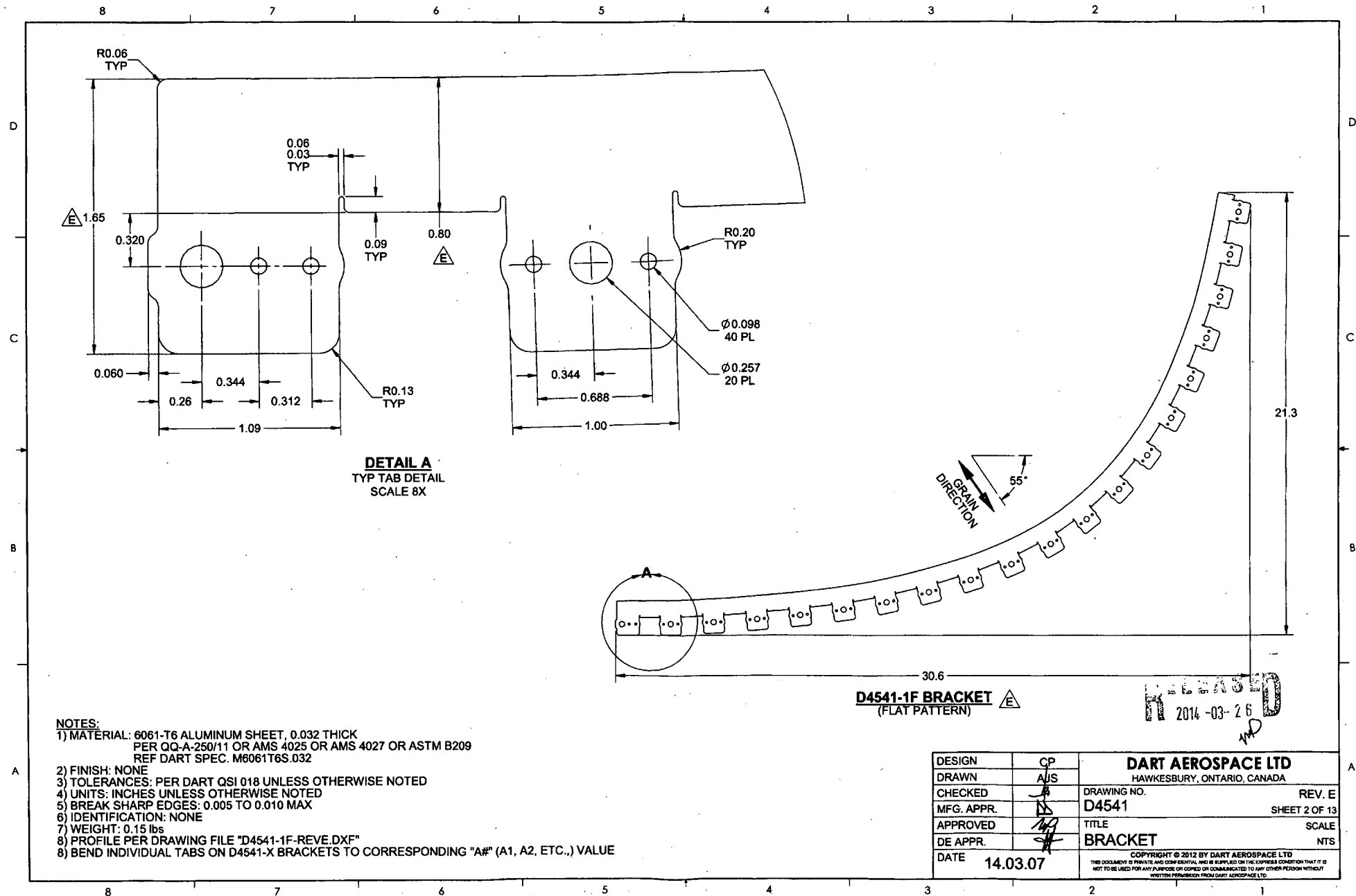
- NOTES:**
- 1) MATERIAL: MAKE FROM D4541-1F.
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
 - 7) WEIGHT: 0.15 lbs
 - 8) BEND INDIVIDUAL TABS ON D4541-X BRACKETS TO CORRESPONDING "A#" (A1, A2, ETC..) VALUE

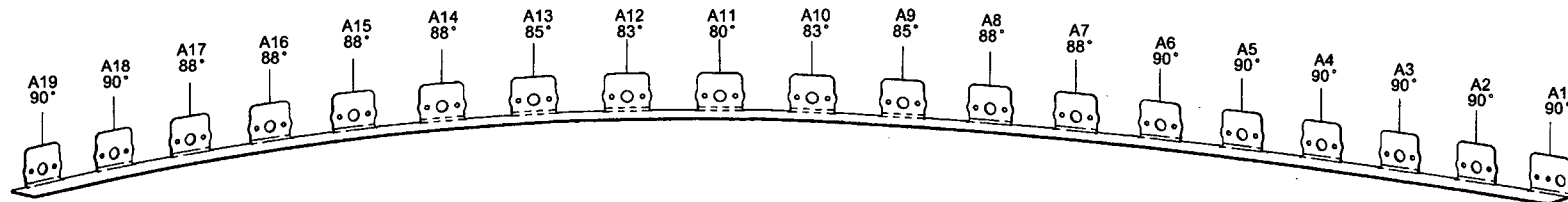
E	ADDED -1 & -2 BENT. SHT 2 & 4 ZN C8 0.80 DIM WAS 0.60. SHT 10 ZN C7 & C4 1.75 DIM WAS 1.55 -5 & -6 UPDATED ACCORDINGLY. SHT 13 ZN C8 2.5 DIM WAS 2.3, 1.66 DIM WAS 1.46. -7 & -8 UPDATED ACCORDINGLY.	AJS	14.03.07
D	ADD BENT SHAPES -3/-4/-7/-8	CP	13.02.04
C	D4541-SF WAS -5; ADD -5/-6; RMV FINISH (-1/-2/-3/-5/-7); 0.70 WAS 0.60 (ZN D1-3)	CP	12.04.20
B	-5: 1.55 WAS 1.45 (ZN C4-4)	CP	12.02.01
A	NEW ISSUE	CP	12.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO. D4541	
MFG. APPR.		REV. E	
APPROVED		TITLE: BRACKET	
DE APPR.		SCALE	
DATE	14.03.07	NTS	

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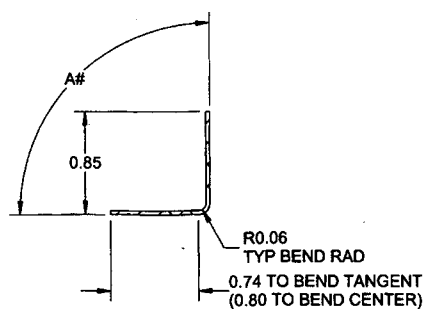
w/o 146053

dem 16/05/09





D4541-2 BRACKET

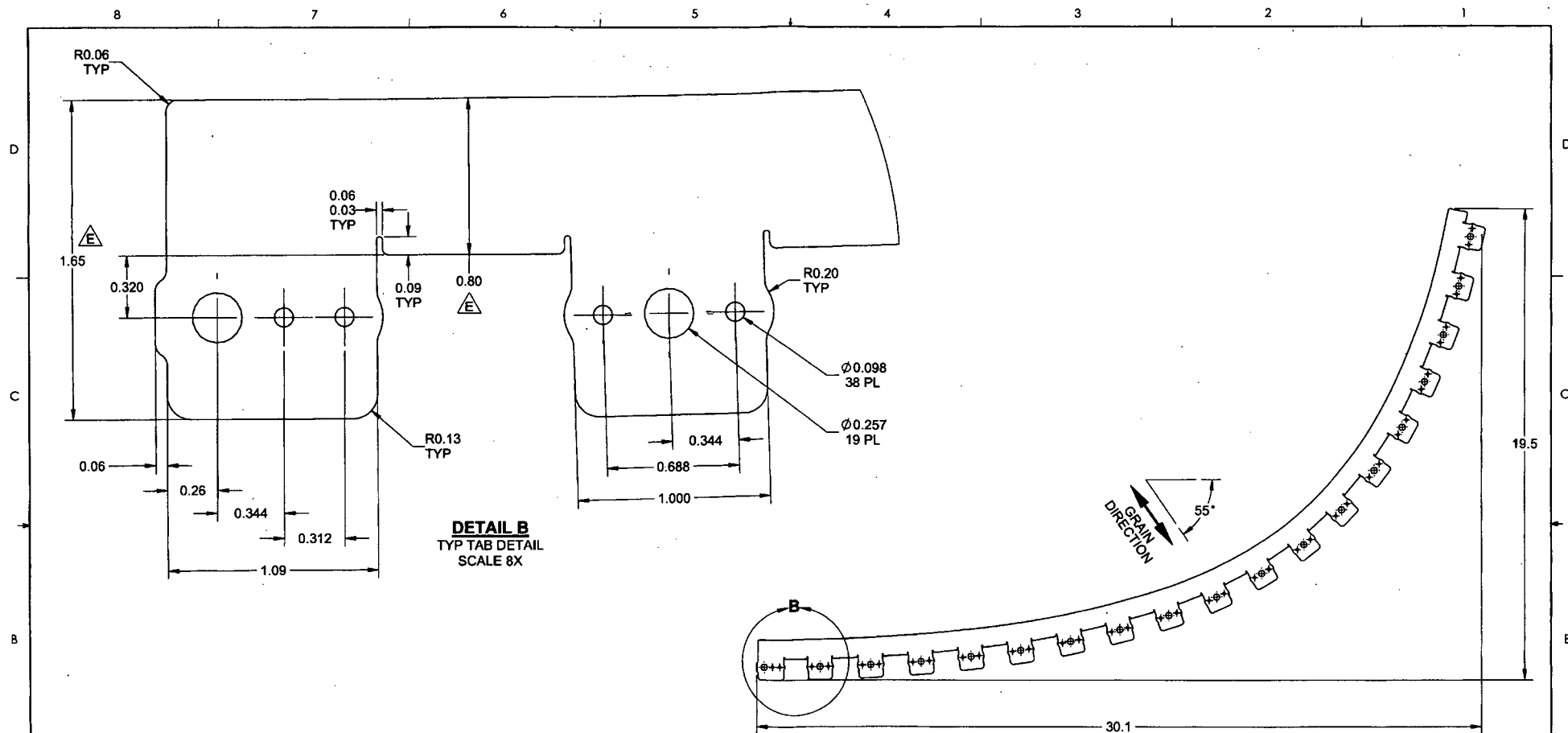


NOTES:

- 1) MATERIAL: MAKE FROM D4541-2F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.15 lbs
- 8) BEND INDIVIDUAL TABS ON D4541-X BRACKETS TO CORRESPONDING "A#" (A1, A2, ETC.,) VALUE

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	A/S		
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D4541	SHEET 3 OF 13
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
DATE	14.03.07	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2014-05-26



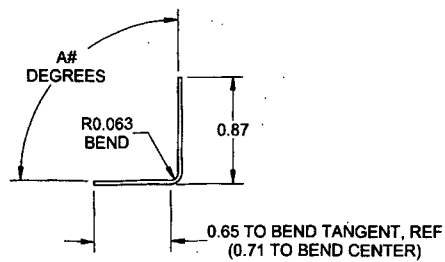
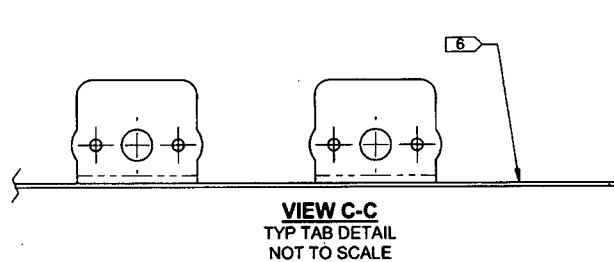
NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.14 lbs
- 8) PROFILE PER DRAWING FILE "D4541-2F-REVE.DXF"

DESIGN	CP	DART AEROSP/ HAWKESBURY, ONT/
DRAWN	AJS	
CHECKED	<i>[Signature]</i>	DRAWING NO. D4541
MFG. APPR.	<i>[Signature]</i>	TITLE BRACKET
APPROVED	<i>[Signature]</i>	
DE APPR.	<i>[Signature]</i>	
DATE	14.03.07	COPYRIGHT THIS DOCUMENT IS PRIVATE AND NOT TO BE USED FOR ANY PURPOSE

RELEASED
2014-03-26

D4541-3 BRACKET

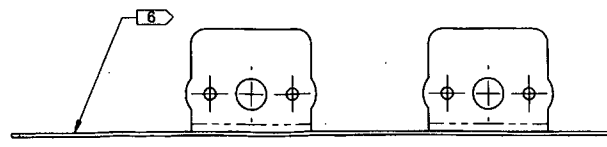
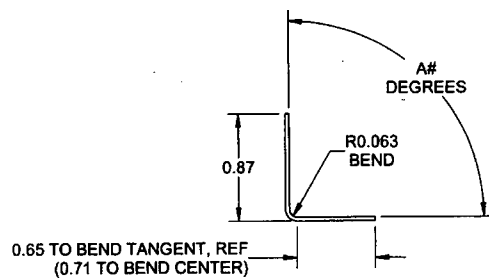
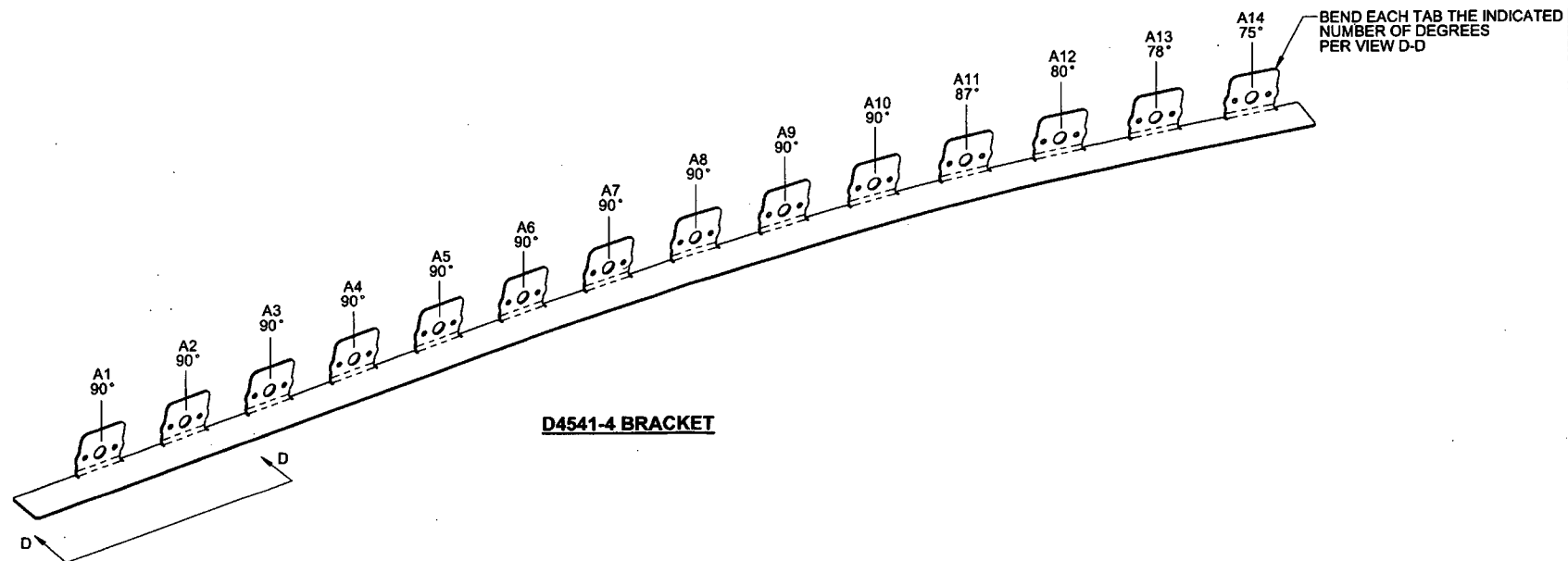


NOTES:

- 1) MATERIAL: MAKE FROM D4541-3F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.09 lbs

DESIGN	CP	DART AEROSPACE LTD	
DRAWN	A/S	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D4541	SHEET 5 OF 13
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BRACKET	NTS
DATE	14.03.07	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2014-03-28



NOTES:

- 1) MATERIAL: MAKE FROM D4541-3F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.09 lbs.

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	J	DRAWING NO.	REV. E
MFG. APPR.	D	D4541	SHEET 6 OF 13
APPROVED	149	TITLE	SCALE
DE APPR.	149	BRACKET	NTS
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RELEASED
2016-03-26

8 7 6 5 4 3 2 1

D

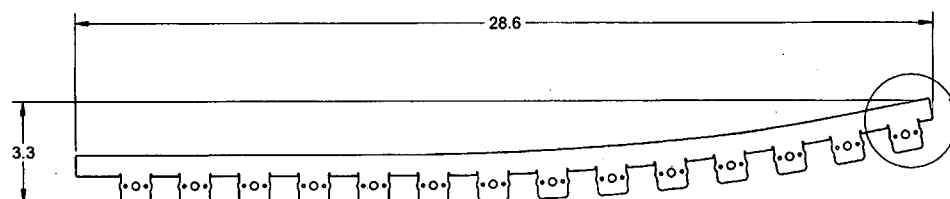
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B

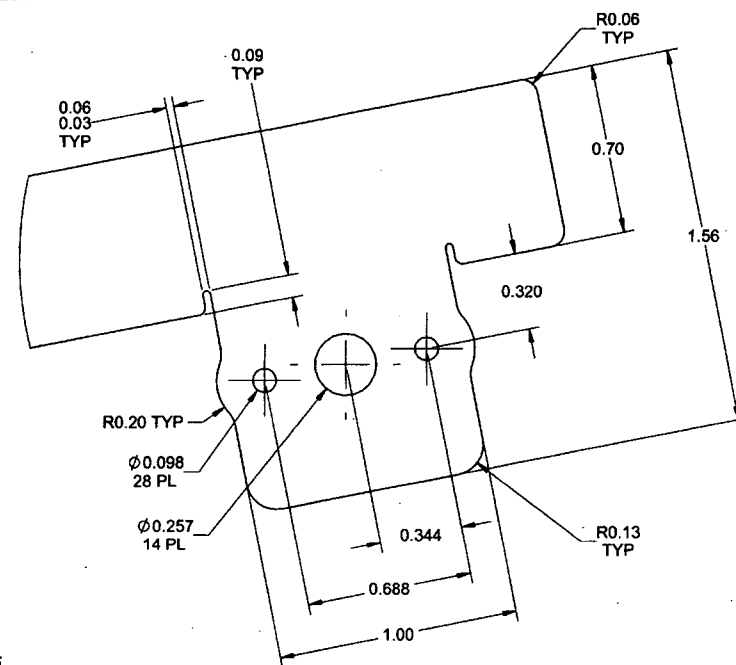
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C

B



D4541-3F FLAT PATTERN



DETAIL E
TYP TAB DETAIL
SCALE 4X

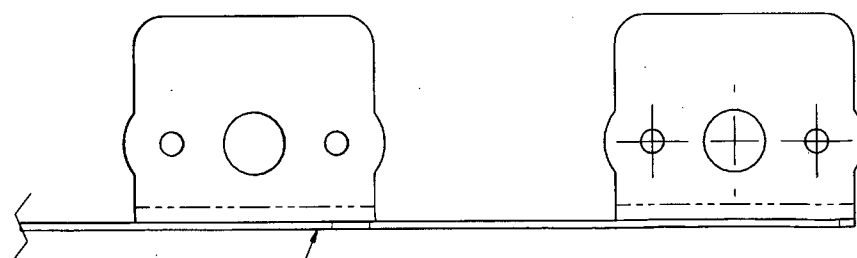
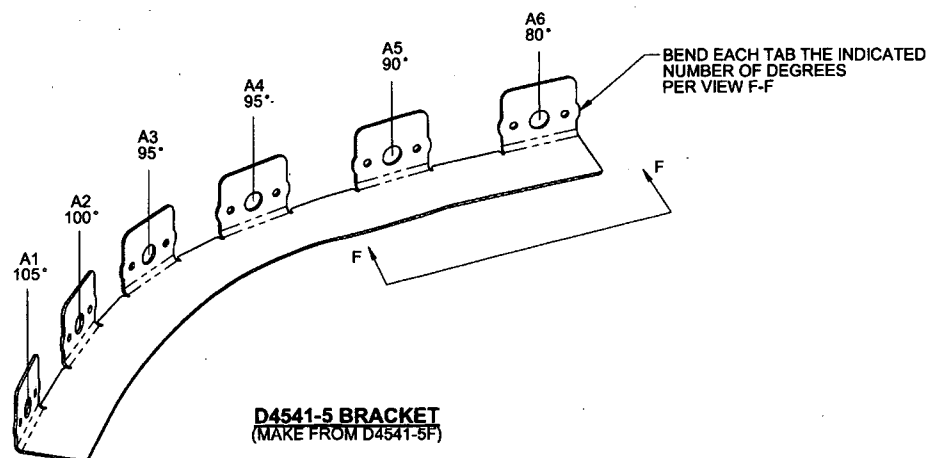
NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.09 lbs
- 8) PROFILE PER DRAWING FILE "D4541-3F-REVE.DXF"

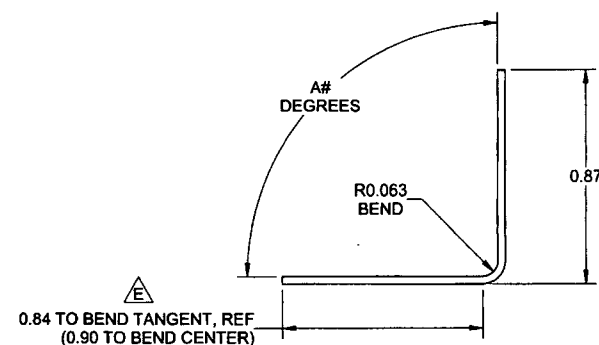
RELEASE
2014-05-26

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D4541	SHEET 7 OF 13
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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8 7 6 5 4 3 2 1



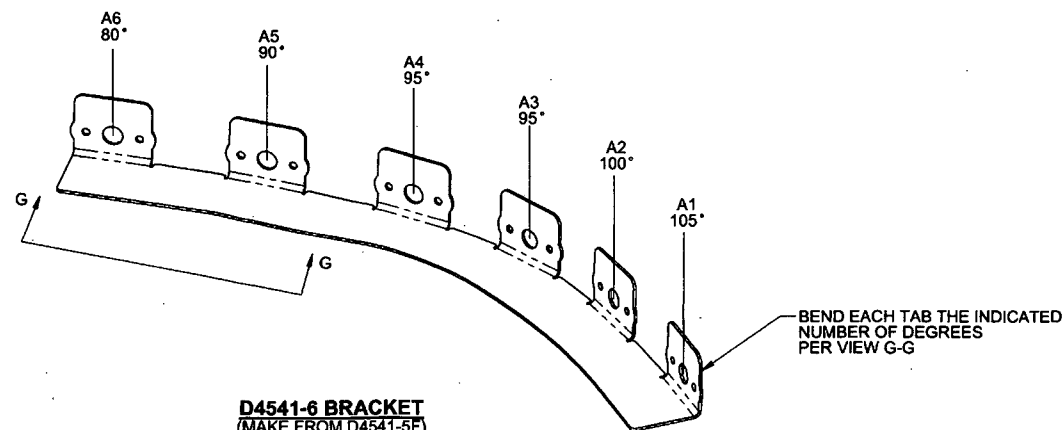
VIEW F-F
BEND DETAIL
SCALE 2X



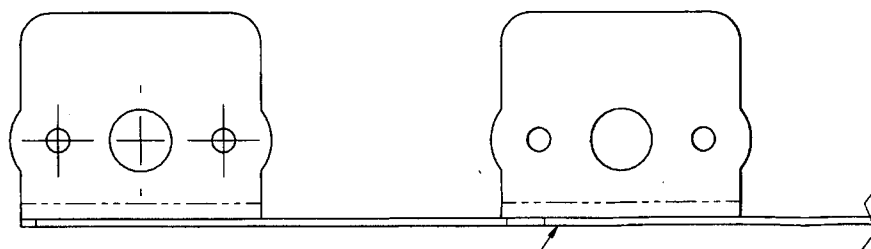
- NOTES:**
- 1) MATERIAL: MAKE FROM D4541-5F
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
 - 7) WEIGHT: 0.04 lbs

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	8	DRAWING NO.	REV. E
MFG. APPR.	18	D4541	SHEET 8 OF 13
APPROVED	19	TITLE	SCALE
DE APPR.	19	BRACKET	NTS
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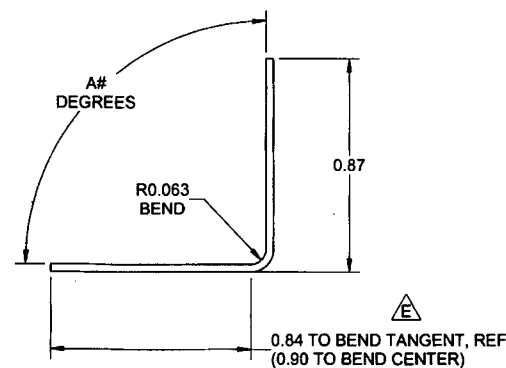
RELEASED
2014-03-26
ND



D4541-6 BRACKET
(MAKE FROM D4541-5F)

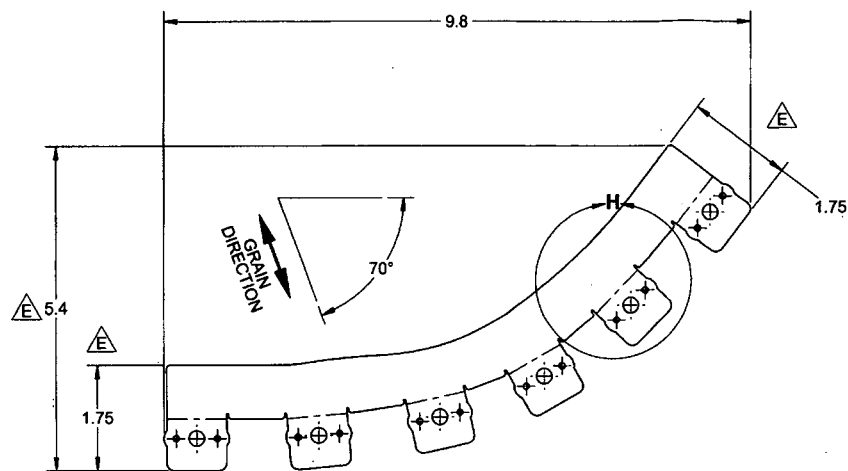


VIEW G-G
BEND DETAIL
SCALE 2X

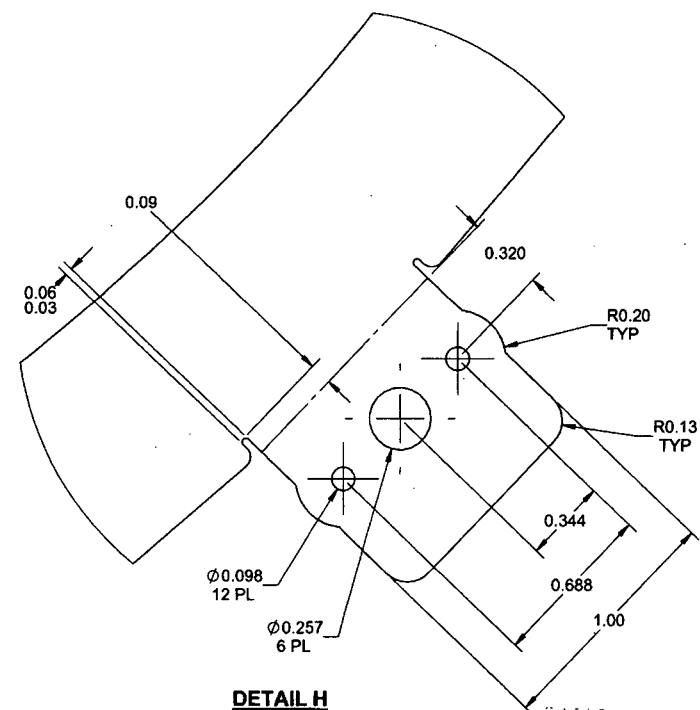


- NOTES:**
- 1) MATERIAL: MAKE FROM D4541-5F
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
 - 7) WEIGHT: 0.04 lbs

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	JS	DRAWING NO.	REV. E
MFG. APPR.	JS	D4541	SHEET 9 OF 13
APPROVED	JS	TITLE	SCALE
DE APPR.	JS	BRACKET	NTS
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D4541-5F FLAT PATTERN

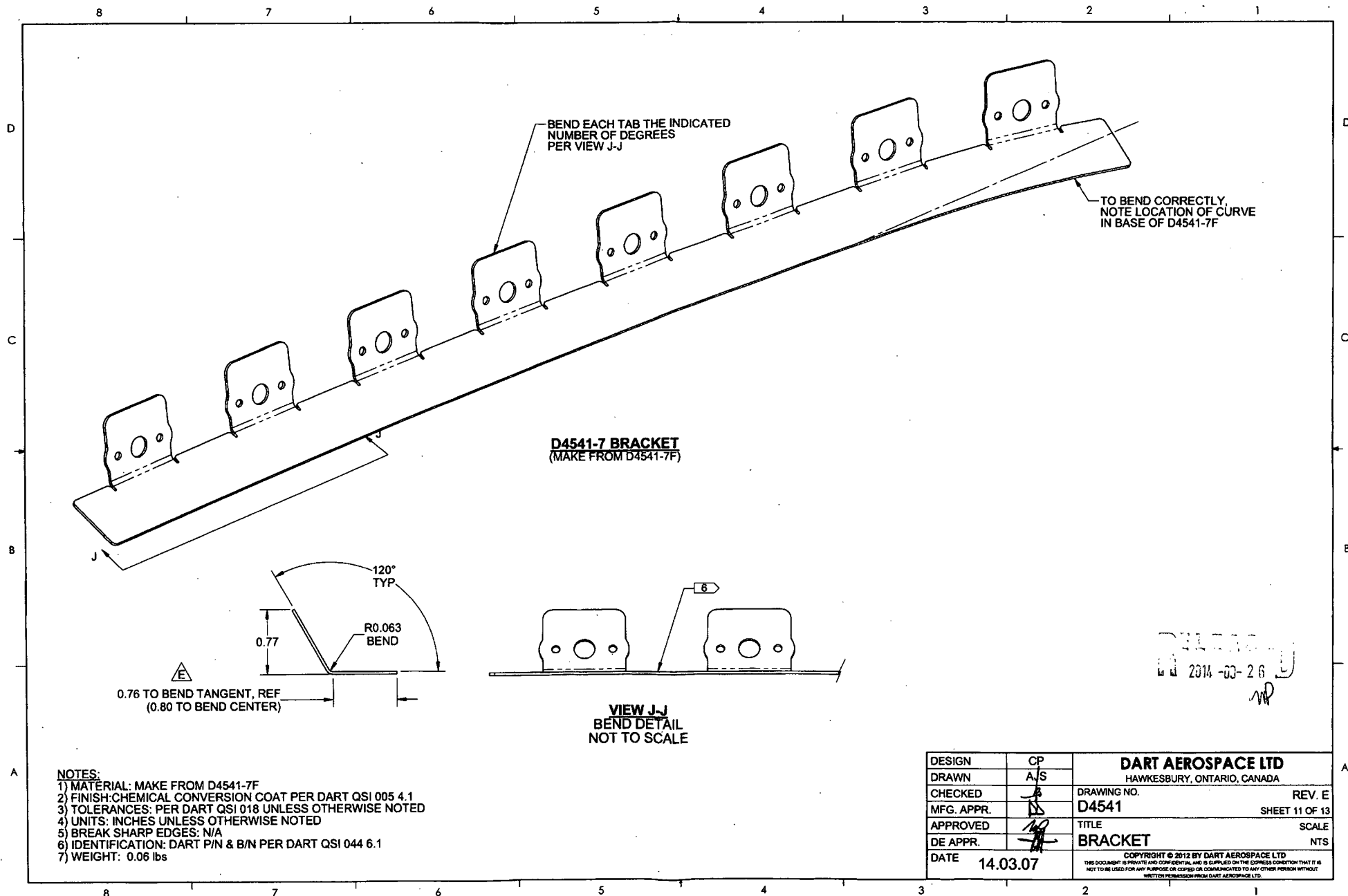


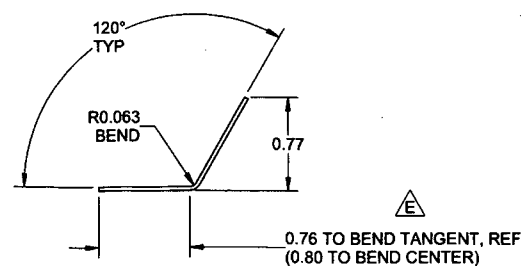
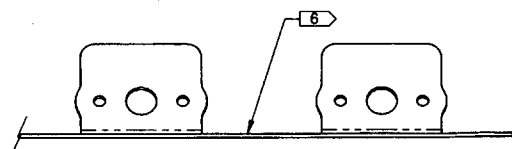
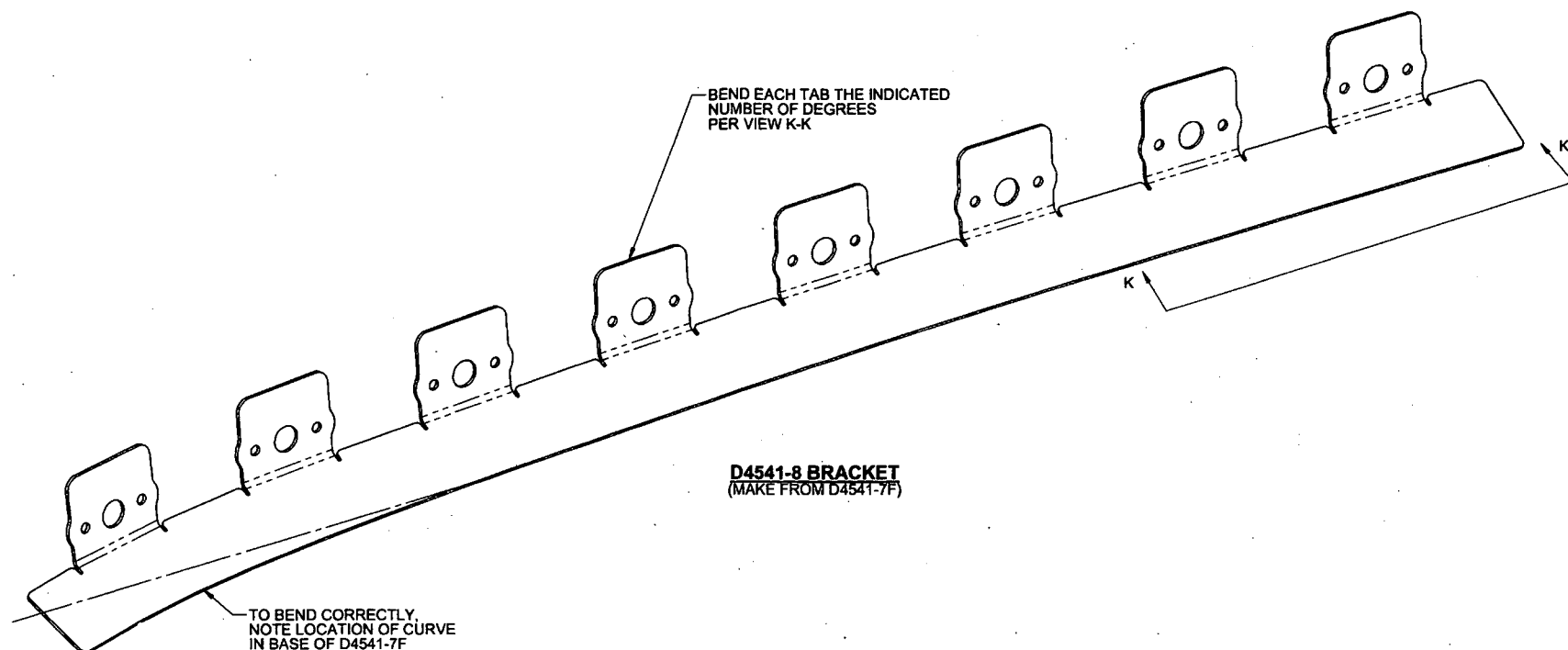
**DETAIL H
TYP TAB DETAIL
SCALE 4X**

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.04 lbs
- 8) PROFILE PER DRAWING FILE "D4541-5F-REVE.DXF"

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	J	DRAWING NO.	REV. E
MFG. APPR.	J	D4541	SHEET 10 OF 13
APPROVED	J	TITLE	SCALE
DE APPR.	J	BRACKET	NTS
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NOTES:

- 1) MATERIAL: MAKE FROM D4541-7F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.06 lbs

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	JB	DRAWING NO.	REV. E
MFG. APPR.	DS	D4541	SHEET 12 OF 13
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	BRACKET	NTS
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2014-03-28

